



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1459
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/742,165	12/20/2000	G. Wyndham Hannaway	GWHA0001	9712

7590 04/01/2004
Kent A. Lembke
Hogan & Hartson L.L.P.
One Tabor Center
1200 Seventeenth Street, Suite 1500
Denver, CO 80202

EXAMINER

ZHONG, CHAD

ART UNIT	PAPER NUMBER
----------	--------------

2154

DATE MAILED: 04/01/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

SC

Office Action Summary

Application No.

09/742,165

Applicant(s)

HANNAWAY, G. WYNDHAM

Examiner

Chad Zhong

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2, 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-26 are presented for examination.
2. The specification is objected to because of the following:

The use of the trademark Microsoft, RealNetworks and VDO among others have been noted in this application (pg 4, line 9; pg 11, line 21; pg 21, lines 2-3; pg 22, line 6). It should be capitalized wherever it appears and be accompanied by the generic terminology. Appropriate correction is required.

Claim Rejections - 35 USC § 112, second paragraph

3. Claims 10, 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. The following terms lack antecedent basis:
 - i. the group – claim 10.
 - ii. the transmission time – claim 12.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-10, 12-13, 15, 20-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Nelson et al. (hereinafter Nelson), US 4,598,397.
6. As per claim 1, Nelson teaches a synchronization system for time-based synchronization of

Art Unit: 2154

streaming media transmitted over a communications network, comprising:

an input interface adapted for linking to the communications network to receive a first and a second media stream, wherein the first and second media streams comprise a plurality of digital data packets being transmitted over the communications network from a first and a second media source, respectively (Col. 5, lines 12-15, lines 26-28, lines 31-35);

a first data buffer for storing the data packets of the first media stream;

a second data buffer for storing the data packets of the second media stream (Col. 9, lines 62-63); and

a controller communicatively linked to the first and the second data buffers for selectively retrieving the data packets of the first and second media streams to form a first and a second time-adjusted stream (Col. 9, lines 66-67; Col. 10, lines 1-3, lines 12-13, lines 23-24), wherein the controller determines a variable transmission delay for the first and the second media streams and performs the selective retrieving based on the determined variable transmission delays (Col. 13, lines 60-64; Col. 10, line 67-Col. 11, line 10);

wherein the controller is further configured for combining the first and second time-adjusted streams into a composite media stream (Col. 5, lines 12-15).

7. As per claim 2, Nelson teaches the system of claim 1, wherein the first and the second media streams include a streaming video portion (Col. 6, lines 57-58).

8. As per claim 3, Nelson teaches the system of claim 2, wherein the streaming video portion of the first media stream is compressed based on a first compression format and the second media stream is compressed based on a second compression format, the second compression format differing from the first compression format (Col. 5, lines 7-15, lines 26-28).

9. As per claim 4, Nelson teaches the system of claim 3, further including a decoding device between the input interface and the first and second data buffers for processing compressed first and

second media streams into a first decoded stream and a second decoded stream, respectively, for storage in the first data buffer and the second data buffer, wherein the first decoded stream and the second decoded stream have compatible formatting (Col. 6, lines 58-63; Col. 7, lines 40-42).

10. As per claim 5, Nelson teaches the system of claim 1, wherein the controller forms the composite media stream by combining the first and the second time-adjusted streams such that the second time-adjusted stream has a first data packet positioned at a start time adjacent a last data packet of the first time-adjusted stream positioned at an end time (Col. 9, lines 50-52).

11. As per claim 6, Nelson teaches the system of claim 5, wherein the controller is communicatively linked to an external timing reference for receiving a reference time value, and wherein the controller is adapted for using the reference time value to determine the start time and the end time (Col. 10, lines 1-3, lines 12-13, lines 23-24).

12. As per claim 7, Nelson teaches the system of claim 5, wherein the controller determines a length of the first media stream (Col. 12, lines 26-29), compares the length with the end time and the variable network delay, computes an edit length for the first media stream, and compresses or lengthens the first media stream to form the first time-adjusted stream, whereby the last data packet coincides with the end time (Col. 13, lines 60-63; Col. 10, lines 12-13, lines 27-39, lines 67-68; Col. 11, lines 1-10).

13. As per claim 8, Nelson teaches the system of claim 1, further including a data parsing device in communication with the input interface configured for retrieving time data from the first and the second media streams and for transmitting the time data to the controller, wherein the controller uses the time data to determine variable transmission delays (Col. 10, lines 27-39; Col. 10, line 67-Col. 11, line 10).

14. As per claim 9, Nelson teaches the system of claim 7, wherein the controller is adapted to create

media server control signals based on the determined variable transmission delays and to transmit the signals over the communications network to the first and the second media sources to control transmission variables of the first and second media streams (Col. 7, lines 4-13).

15. As per claim 10, Nelson teaches the system of claim 9, wherein the transmission variables are selected from the group consisting of transmission timing, transmission rate, and transmission length (Col. 12, lines 26-29; Col. 10, lines 23-24, lines 28-39).

16. As per claim 12, Nelson teaches the system of claim 1, wherein the controller combines the first media stream and second media stream in the composite media stream such that a data packet transmitted in the first media stream from the first media source at a transmission time is matched with a corresponding data packet in the second media stream transmitted from the second media source at the transmission time (Col. 5, lines 12-15; Col. 6, lines 59-63; Col. 10, lines 27-39).

17. As per claim 13, Nelson teaches the system of claim 12, wherein the combining is performed by the controller by selecting a transmission rate for the first and the second media streams to correct for the determined variable transmission delays (Col. 10, line 67-Col. 11, line 10; Col. 10, lines 27-39).

18. As per claim 15, Nelson teaches an apparatus for synchronizing media streams transmitted over a communication network, comprising:

an input interface linked to the communications network and configured for receiving a first and a second media stream transmitted by a first and a second media source, respectively, wherein the first media stream comprises a plurality of data packets encoded to a first compression standard and the second media stream comprises a plurality of data packets encoded to a second compression standard differing from the first compression standard (Col. 5, lines 12-15, lines 25-27);

a decoder for decoding the first and the second media streams into a first and a second intermediate

Art Unit: 2154

media stream, respectively, wherein the first and second intermediate streams are compatibly formatted (Col. 6, lines 58-63); and

a streaming media processor for combining the first and the second intermediate format media streams into a composite media stream encoded according to an output compression standard (Col. 5, lines 12-15, lines 25-27; Col. 6, lines 58-63).

19. As per claim 20, Claim 20 is rejected for the same reasons as rejection to claim 1 above.

20. As per claim 21, Nelson teaches the method of claim 20, further including:

retrieving timing data from the first and second media stream (Col. 5, lines 49-54);

comparing the timing data with a reference time to determine a first and a second transmission delay value (Col. 10, lines 1-3, lines 12-13, lines 23-24); and

adjusting the first and the second media streams to correct for the first and the second transmission delay values (Col. 10, lines 27-39; Col. 10, line 67-Col. 11, line 10).

21. As per claim 22, Nelson teaches the method of claim 21, wherein the adjusting includes creating a first and a second control signal in response to the first and the second transmission delay values, respectively, and includes transmitting the first and the second control signals to the first and the second media source to control transmittal of the first and the second media streams (Col. 7, lines 5-13; Col. 12, lines 26-29).

22. As per claim 23, Nelson teaches the method of claim 21, storing the data packets of the first media stream in a first data buffer and the data packets of the second media stream in a second data buffer (Col. 9, lines 62-63), and wherein the adjusting includes selectively retrieving the data packets of the first media stream from the first data buffer to correct for the first transmission delay value and selectively retrieving the data packets of the second media stream from the second butter to correct for the second

Art Unit: 2154

transmission delay value (Col. 13, lines 60-64; Col. 10, line 67-Col. 11, line 10).

23. As per claim 24, Nelson teaches the method of claim 21, wherein the adjusting includes matching the data packets of the first and the second media streams based on transmittal times from the first and the second media sources, respectively, whereby the first and the second media streams are presented in the synchronized media stream concurrently (Col. 5, lines 12-15; Col. 6, lines 59-63; Col. 10, lines 27-39).

24. As per claims 25 and 26, Claims 25 and 26 are rejected for the same reasons as rejections to claim 3 above.

Claim Rejections - 35 USC § 103

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

26. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (hereinafter Nelson) 4,598,397, in view of Applicant Admitted Prior Art (AAPA).

27. As per claim 11, Nelson does not explicitly teach the system of claim 1, wherein the composite media stream comprises a streaming video portion having picture-in-picture or side by side portions formed with the data packets of the first and the second time-adjusted streams.

28. AAPA teaches the system of claim 1, wherein the composite media stream comprises a streaming video portion having picture-in-picture or side by side portions formed with the data packets of the first and the second time-adjusted streams (pg 3, lines 21-24)

29. It would have been obvious to one of ordinary skill in this art at the time of invention was made

to combine the teaching of AAPA and Nelson because they both dealing with combining streams into a composite stream. Furthermore, the teaching of AAPA to allow wherein the composite media stream comprises a streaming video portion having picture-in-picture or side by side portions formed with the data packets of the first and the second time-adjusted streams would improve the functionality for

Nelson's system by allowing for simultaneous display of streams on the same screen.

30. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (hereinafter Nelson) 4,598,397, in view of 'Official Notice'.

31. As per claim 14, Nelson teaches the system of claim 1, further including an output interface for transmitting the composite media stream from the controller over the communications network and including an end-user node linked to the communications network for receiving the composite media stream (Col. 5, lines 12-15; Col. 5, lines 49-54).

32. Nelson does not teach wherein the end-user node comprises a synchronizer for determining a variable transmission delay between the controller and the end-user node and for performing time based correction of the composite media stream to adjust for the variable transmission delay. However 'Official Notice' is taken by the Examiner that an end user synchronizer is notoriously well known. It would have been obvious to have used an end node synchronizer for the current invention, because doing so would ensure the integrity of the synchronized signals while traveling through lossy network, thereby improving processing efficiency.

33. Claim 16-19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (hereinafter Nelson) 4,598,397, in view of Anderson et al. (hereinafter Anderson), US 6,115,422.

34. As per claim 16, Nelson does not teach the apparatus of claim 15, further including a controller in

Art Unit: 2154

communication with the input interface and the streaming media processor adapted for determining a variable transmission delay for the first and the second media streams based on a transmission time for a data packet of the first media stream and a time of receipt at the input interface of the data packet and on a transmission time for a data packet of the second media stream and a time of receipt at the input interface of the data packet.

35. Anderson teaches the apparatus of claim 15, further including a controller in communication with the input interface and the streaming media processor adapted for determining a variable transmission delay for the first and the second media streams based on a transmission time for a data packet of the first media stream and a time of receipt at the input interface of the data packet and on a transmission time for a data packet of the second media stream and a time of receipt at the input interface of the data packet (Col. 13, lines 57-62; Col. 2, lines 24-40; Col. 3, lines 33-35, lines 55-57; Col. 4, lines 26-28).

36. It would have been obvious to one of ordinary skill in this art at the time of invention was made to combine the teaching of Nelson and Anderson because they both dealing with combine multiple streams into one stream based on a time synchronized fashion. Furthermore, the teaching of Anderson to allow a controller in communication with the input interface and the streaming media processor adapted for determining a variable transmission delay for the first and the second media streams based on a transmission time for a data packet of the first media stream and a time of receipt at the input interface of the data packet and on a transmission time for a data packet of the second media stream and a time of receipt at the input interface of the data packet would improve the latency for Nelson's system by accelerate or decrease the rate of processing incoming signals based on amount of current delay in the system.

37. As per claim 17, Nelson teaches the apparatus of claim 16, wherein the controller is further configured for adjusting the first intermediate format media stream based on the variable transmission

delay of the first media stream and for adjusting the second intermediate format media stream based on the variable transmission delay of the second media stream to create a first and a second time-adjusted stream (Col. 10, line 67-Col. 11, line 10; Col. 10, lines 27-39).

38. As per claim 18, Nelson teaches the apparatus of claim 17, wherein the processor combines the first and second time-adjusted stream to form the composite media stream with the first media stream data packet and the second media stream data packet being positioned for concurrent delivery (Col. 7, lines 5-13; Col. 5, lines 12-15, lines 49-54; Col. 9, lines 66-Col. 10, line 3).

39. As per claim 19, Nelson teaches the apparatus of claim 17, wherein the time of receipt is determined based on a time reference signal received from an external timing reference (Col. 10, lines 1-3, lines 12-13, lines 23-24; Col. 12, lines 26-29).

Conclusion

40. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents and publications are cited to further show the state of the art with respect to "Webcasting Method And System For Time Based Synchronization Of Multiple, Independent Media Streams".

- | | | |
|------|------------|-------------|
| i. | US 5596420 | Daum |
| ii. | US 4833673 | Chao et al. |
| iii. | US 6134379 | LaMacchia |

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chad Zhong whose telephone number is (703) 305-0718. The examiner can normally be reached on M-F 7am-4:30pm.

Art Unit: 2154

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on 703-305-8498. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

CZ

March 24, 2004



JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100